APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,386	04/05/2001	James Leppek	51159CON2 (ISD-28)	7780

7590 11/10/2003		EXAMINER

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ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/827,386	Applicant(s) LEPPEK, JAMES
	Examiner James Seal	Art Unit 2131

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _05 April 2001_ .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-11_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-11_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _05 April 2001_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   This Action is in response to applicant's correspondence dated 5 April 2001.

2.   Substitute Abstract has been entered.

3.   Amendment to the Specification before first line has been entered.

4.   Claims 12-15 have been cancelled.

5.   Claims 1-11 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 1-5 rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

In part (a) of claim 1, the applicant recites "different data encryption operators,

and which may be used, but none of which is necessarily required to encrypt said data

into an unintelligible form" which implies that the data may be placed in an unintelligible

form without the need of any of the encryption operators. Thus the claim states it is

possible to make unintelligible without applying any operations to the data. For the

purpose of prior art, the examiner will take this to mean that one may elect to select no

encryption operator in which case the data will be encrypted in an unencrypted form.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yorke-Smith U.S. 5548648 A, and further in view of Stinson, Cryptography Theory and

Practice.

7.   As per claim 1, the limitation for controllably encryption of data to be transmitted

over a communication system is disclosed by Yorke-Smith (see Column 1, lines 4-8;

lines 53-57; lines 61-64; Column 2, lines 57-58; Column 3, lines 36-41). The limitation

of applying a first encryption operator to produce a first encryption form is disclosed by

Yorke-Smith (see Column 1, lines 4-8; lines 53-57; lines 61-64; Column 2, lines 57-58;

Column 3, lines 36-41; Column 3, lines 66-67 through Column 4 lines 1-7) for transport

over communication links is disclosed by Yorke-Smith Column 1, lines 4-8). Yorke-

Smith is silent on the limitation of passing the output of the first encryptor through a

second selection of encryption operators (algorithms or encryption function); however,

Stinson discloses product cryptosystems (pages 64-67) that is compounding (combining

or cascading or producting) cryptosystems forming their product. By following one

encryption system with a different encryption system (e.g. substitution followed by

transposition such as in DES) we achieve greater mixing (as per Shannon top page 64

Stinson), than either cipher separately provides. Thus one of ordinary skill in the art at

the time the invention was made, would have been motivated to combine the teachings

of Stinson with those of Yorke-Smith because cascading two different encryption

algorithms achieve greater mixing of the plaintext with the key and hence provides

greater security. Furthermore, it is obvious that if the algorithms of the first stage are

changing then the algorithms of the second stage must change in such a way that he

algorithms will always be different in order to achieve the greater mixing. Claim 1 is

rejected.

8.   As per claim 2, the further limitation that the output of said compound encrypted

data streams over said communication path is disclosed by the combination Yorke-

Smith /Stinson see Column 1, 4-8 and page 64. The limitation of passing through a

cascade of decryption stages at the receiving end in which the plaintext data is

recovered is disclosed by the Combination Yorke-Smith /Stinson Column 1, lines 44-47

and page 64. Claim 2 is rejected.

9.   As per claim 3, the limitations of storing and retrieving encryption operators

(encryption functions) with regards to compound encryption is not specifically disclosed

by Yorke-Smith/Stinson, however, it would be inherent from the fact that a plurality of

such algorithms used in the Yorke-Smith disclosure could not be resident in the CPU

and thus would have to stored and retrieved from memory. Claim 3 is rejected.

10.   As per claim 4, the limitation of transporting the compound encrypted output over

a communication path (link) to a recipient is disclosed in Yorke-Smith (see Column 1

lines 4-8) and the limitation of passing the compounded encrypted output through a

second then a first operator for decryption (is disclosed 44-47). Claim 4 is rejected.

11.   As per claim 5, the limitation of storing a plurality of different decryption operators

and retrieving them to perform the decryption of the compounded encrypted output to

recover the data would be inherent from the fact that a plurality of such algorithms used in the Yorke-Smith disclosure could not be resident in the CPU and thus would have to stored and retrieved from memory. Claim 5 is rejected.

12.   As per claim 6, the limitation of controllably encrypted data to be transmitted over communication links is disclosed (Column 1, lines 4-8; lines 53-57; lines 61-64, Column 3, lines 36-41), providing a plurality of encryption operators (Column 4, lines 1-7), passing data over a communication line (Column 1, 4-8) sequentially passing data to be transported through respectively different encryption operators is disclosed by Stinson (see page 64). Claim 6 is rejected.

13.   As per claim 7, transporting the compound-encrypted data to a recipient and through a sequence of multiple decryption operators that sequentially decrypt said compound-encrypted data to recover the data is disclosed by Yorke-Smith/Stinson (Column 1, lines 44-52 and page 64). Claim 7 is rejected.

14.   As per claim 8, the limitation of storing a plurality of different encryption operators in a database retrieving such operators from the database and assembling selected ones different from one another Column 3, lines 66-67 and Column 4, lines 1-6 and Stinson page 64. The limitation of passing the data through a sequence of encryptors to obtain compound encrypted data (Stinson 64) and then transmitting data over a communication link is disclosed by Yorke-Smith Column 1, lines 4-8. Claim 8 is rejected.

15.   As per claim 9, the further limitation of transporting the compound-encrypted data stream over a communication link to a recipient is disclosed by Yorke-Smith Column 1,

lines (Column 1, lines 4-8), retrieving decryption operators from a data base decrypting data by passing compound data through successively through decryptors is disclosed by Yorke-Smith/Stinson (Column 1, lines 44-47 and page 46). Claim 9 rejected.

16.   As per claim 10, the limitation of providing a plurality of respectively different data encryption operators and generating a sequence of such operators (See Column 3, 66-67 through Column 4, lines 1-6 and page 64). The limitation of passing the through a sequence of data encryption operators so as to produce a compound-encryption output data stream (Stinson page 64). Claim 10 is rejected.

17.   As per claim 11, the limitation of transporting the compound-encrypted output over communication links to a recipient is disclosed by Yorke-Smith (Column 1, lines 4-8). The limitation of passing the transported compound-encrypted output data through a sequence of decryptors to recover data is disclosed by Yorke-Smith Column 1, lines 44-47. Claim 11 is rejected.
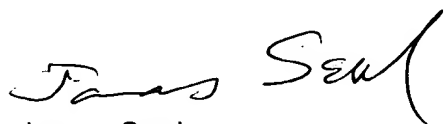
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Seal whose telephone number is 703 308 4562. The examiner can normally be reached on M-F, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gail Hayes can be reached on 703 305 9711. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703 308

3900.

James Seal
Examiner AU 2131
November 3, 2003